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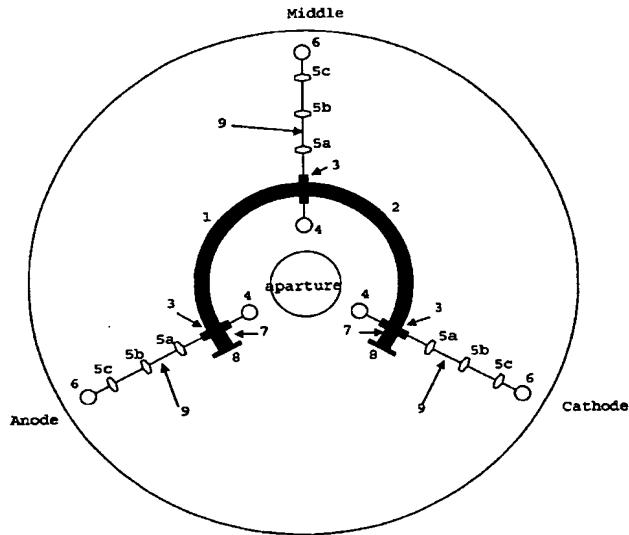
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- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: A TWO-DIMENSIONAL MICROFLUID BIOMOLECULE SEPARATION SYSTEM



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(57) Abstract: The invention relates to a micro fluid biomolecule separation system comprising a primary separating path and one or more secondary process paths. The primary separating path being in the form of a separating coating carried on a substrate, wherein the separating coating comprises one or more separating layers, and at least one separating layer consists of or comprises one or more pH active components. The fluid biomolecule separation system comprises means for applying a voltage over the primary separating path. The secondary process path(s) comprises one or more inlets in liquid communication with the primary separating path. The one or more inlets is placed along or extends along the primary separating path, whereby biomolecules separated along the primary path is capable of being introduced into the secondary process path(s) for being processed further.



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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/DK 03/00690

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G01N27/447

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G01N B01J B01D B01F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 1 162 454 A (KARUBE ISAO) 12 December 2001 (2001-12-12) paragraph [0026] ---	1-27
Y	EP 1 044 716 A (CAHILL MICHAEL DR ;NORDHEIM ALFRED PROF DR (DE); DRUKIER ANDRZEY D) 18 October 2000 (2000-10-18) paragraph [0020] - paragraph [0027] ---	1-27
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A	US 2001/055812 A1 (KIEFFER-HIGGINS STEPHEN G ET AL) 27 December 2001 (2001-12-27) paragraph [0319] - paragraph [0321]; figures 28,29 -----	1-27



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the International search

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## INTERNATIONAL SEARCH REPORT

International Application No. PCT/DK 03/00690

### FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-3,10-13

claims 1-3, 10-13 directed to the pH active components and their layout.

2. Claims: 4-9,14

directed to physical parameters of the primary path.

3. Claims: 15-17

directed to the substance of the secondary path.

4. Claims: 18-27

directed to the structure of the scondary paths.

**INTERNATIONAL SEARCH REPORT**

 International Application No  
 PCT/DK 03/00690

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/DK 03/00690

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.